Pro-COL1A1 (M-60): sc-30136

SANTA CRUZ®
BIOTECHNOLOGY

The Power to Question

BACKGROUND

The extensive family of COL gene products (collagens) is composed of several chain types, including fibril-forming interstitial collagens (types I, II, III and V) and basement membrane collagens (type IV), each type containing multiple isoforms. Collagens are fibrous, extracellular matrix proteins with high tensile strength and are the major components of connective tissue, such as tendons and cartilage. All collagens contain a triple helix domain and frequently show lateral self-association in order to form complex connective tissues. Several collagens also play a role in cell adhesion, important for maintaining normal tissue architecture and function.

REFERENCES

1. Bellamy, G., et al. 1971. Evidence for procollagen, a biosynthetic precursors of collagen. Proc. Natl. Acad. Sci. USA 68: 1138-1142.

2. Church, R.L., et al. 1971. Collagen biosynthesis: synthesis and secretion of a high molecular weight collagen precursor (procollagen). Proc. Natl. Acad. Sci. USA 68: 2638-2642.

3. Bornstein, P., et al. 1972. Procollagen: conversion of the precursor to collagen by a neutral protease. Science 175: 544-546.

4. Bateman, J.F., et al. 1996. In Comper, W.D., ed. Extracellular Matrix, Volume 2, Molecular components and interactions. Harwood. 22-67.

CHROMOSOMAL LOCATION

Genetic locus: Col1a1 (mouse) mapping to 11 D.

SOURCE

Pro-COL1A1 (M-60) is a rabbit polyclonal antibody raised against amino acids 1-60 mapping at the N-terminus of Collagen α1 Type I precursor of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Pro-COL1A1 (M-60) is recommended for detection of collagen α1 type I precursor of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for COL1A1 siRNA (m): sc-44044, COL1A1 shRNA Plasmid (m): sc-44044-SH and COL1A1 shRNA (m) Lentiviral Particles: sc-44044-V.

Molecular Weight of Pro-COL1A1 precursor: 140-210 kDa.

Positive Controls: COL1A1 (m): 293T Lysate: sc-125157 or 3T3-L1 cell lysate: sc-2243.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA
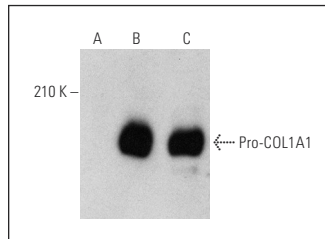
Pro-COL1A1 (M-60): sc-30136. Western blot analysis of Pro-COL1A1 expression in non-transfected 293T: sc-117752 (**A**), mouse COL1A1 transfected 293T: sc-125157 (**B**) and 3T3-L1 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lantz, R.C., et al. 2009. *In utero* and postnatal exposure to arsenic alters pulmonary structure and function. Toxicol. Appl. Pharmacol. 235: 105-113.

2. Tang, Y., et al. 2009. Curcumin eliminates leptin's effects on hepatic stellate cell activation via interrupting leptin signaling. Endocrinology 150: 3011-3020.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
Satisfation
Guaranteed

Try **COL1A1 (3G3): sc-293182**, our highly recommended monoclonal alternative to Pro-COL1A1 (M-60).